

FILE 'USPATFULL, JAPIO, PATOSEP, WPIDS' ENTERED AT 06:56:01 ON 19  
JAN 1999

L1           0 S (CHIP CARRIER) (P) (BOARD) (P) ((THERMAL) (P) (EXPANSION) (P) (L2       1 S (CHIP CARRIER) (P) (BOARD) (P) ((THERMAL) (P) (EXPANSION) (P) (L3       1 S (CHIP CARRIER) (P) (BOARD OR SUBSTRATE) (P) ((THERMAL) (P) (E L4       0 S (CHIP CARRIER) (P) (SUBSTRATE) (P) ((THERMAL) (P) (EXPANSION) (L5       1 S (SUBSTRATE) (P) ((THERMAL) (P) (EXPANSION) (P) ("PPM/C")) AND L6       6 S (BOARD) (P) ((THERMAL) (P) (EXPANSION) (P) ("PPM/C")) AND (SO L7       1 S (CHIP CARRIER) AND ("17-20.TIMES.10.SUP.-6 PPM/C") L8       2 S (CARRIER) AND ("17-20.TIMES.10.SUP.-6 PPM/C") L9       1 S (MODULE) AND ("17-20.TIMES.10.SUP.-6 PPM/C") L10      2 S (BOARD OR SUBSTRATE) AND ("17-20.TIMES.10.SUP.-6 PPM/C")

=> s (chip carrier or  
module) (P) (substrate) (P) ((thermal) (P) (expansion) (P) ("ppm/C")) and (solder  
balls or solder bumps)

2 FILES SEARCHED...  
L11       0 (CHIP CARRIER OR MODULE) (P) (SUBSTRATE) (P) ((THERMAL) (P) (EXP  
ANSION) (P) ("PPM/C")) AND (SOLDER BALLS OR SOLDER BUMPS)

=> s (chip carrier or  
module) (P) (board) (P) ((thermal) (P) (expansion) (P) ("ppm/C")) and (solder balls  
or solder bumps)

2 FILES SEARCHED...  
L12       1 (CHIP CARRIER OR MODULE) (P) (BOARD) (P) ((THERMAL) (P) (EXPANSI  
ON) (P) ("PPM/C")) AND (SOLDER BALLS OR SOLDER BUMPS)

=> s (chip carrier or module) (P) (board or  
substrate) (P) ((thermal) (P) (expansion) (P) ("ppm/C"))

1 FILES SEARCHED...  
L13       1 (CHIP CARRIER OR MODULE) (P) (BOARD OR SUBSTRATE) (P) ((THERMA  
L) (P) (EXPANSION) (P) ("PPM/C"))

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=> s (chip carrier or  
module) (P) (substrate) (P) ((thermal) (P) (expansion) (P) ("ppm/C")) and (solder  
balls or solder bumps)

2 FILES SEARCHED...  
L11       0 (CHIP CARRIER OR MODULE) (P) (SUBSTRATE) (P) ((THERMAL) (P) (EXP  
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=> s (chip carrier or  
module) (P) (board) (P) ((thermal) (P) (expansion) (P) ("ppm/C")) and (solder balls  
or solder bumps)

2 FILES SEARCHED...  
L12       1 (CHIP CARRIER OR MODULE) (P) (BOARD) (P) ((THERMAL) (P) (EXPANSI  
ON) (P) ("PPM/C")) AND (SOLDER BALLS OR SOLDER BUMPS)

=> s (chip carrier or module) (P) (board or  
substrate) (P) ((thermal) (P) (expansion) (P) ("ppm/C"))

1 FILES SEARCHED...  
L13       1 (CHIP CARRIER OR MODULE) (P) (BOARD OR SUBSTRATE) (P) ((THERMA  
L) (P) (EXPANSION) (P) ("PPM/C"))

=> s (chip carrier or substrate or board or module) and (thermal expansion)

105733 CHIP  
300095 CARRIER  
2590 CHIP CARRIER  
(CHIP (W) CARRIER)  
266451 SUBSTRATE  
159590 BOARD  
84517 MODULE  
307602 THERMAL  
190606 EXPANSION  
47440 THERMAL EXPANSION  
(THERMAL (W) EXPANSION)  
L1 17057 (CHIP CARRIER OR SUBSTRATE OR BOARD OR MODULE) AND (THERMAL  
EX PANSION)

=> s ".times.10.sup.-6"

876584 "TIMES"  
2115674 "10"  
592148 "SUP"  
2172550 "6"  
L2 44830 ".TIMES.10.SUP.-6"  
("TIMES" (W) "10" (W) "SUP" (W) "6")

=> s l1 and l2

L3 2253 L1 AND L2

=> s (glass filled epoxy or FR-4 or glass epoxy)

364533 GLASS  
350618 FILLED  
113060 EPOXY  
303 GLASS FILLED EPOXY  
(GLASS (W) FILLED (W) EPOXY)  
20615 FR  
2343799 4  
844 FR-4  
(FR (W) 4)  
364533 GLASS  
113060 EPOXY  
2404 GLASS EPOXY  
(GLASS (W) EPOXY)  
L4 3416 (GLASS FILLED EPOXY OR FR-4 OR GLASS EPOXY)

=> s l3 and l4

L5 102 L3 AND L4

# GPI WEB CLIENT

## Structured Search

Database to Search:

- US Patents
- Japanese Patents
- European Patents
- USOCR Patents

Searchable Index:

- Basic Index (BI)

Term 1 text:

Operator: AND  Proximity Distance:

Searchable Index:

- Basic Index (BI)

Term 2 text:

Display  
40 Patents,  
Starting With #:  In Display Format:

Generate:  Hit List  Hit Count  Image

### Search History

<u>DB Name</u>	<u>Query</u>	<u>Hits</u>	<u>Set Name</u>	<u>Time</u>
EPO	#L2	29	L3	Thu Jan 28 14:35:33 1999
EPO	"chip carrier"/BI AND "thermal expansion"/BI	29	L2	Thu Jan 28 14:35:16 1999
USPAT	"chip carrier"/BI AND "thermal expansion"/BI	689	L1	Thu Jan 28 14:35:04 1999